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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,772	12/29/2000	Stephen S. Selkirk	00-062-DSK	8708

7590 05/15/2003

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EXAMINER

CHEN, TE Y

ART UNIT	PAPER NUMBER
2171	7

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/751,772	Selkirk et al.
	Examiner	Art Unit
	T. Chen	2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Mar 27, 2003

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

4) Claim(s) 12-31 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 12-31 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). 7 6) Other:

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Response to Amendment

1. This is in response to amendment filed on 03/27/2003 (paper # 6).
2. Claims 1-11 have been canceled, claims 12-31 are newly added.

Specification

3. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "a storage management schema using a bit reducing in which the number of table entries to be manipulated to perform storage management operations is reduced" [see Page 4, last paragraph of the amendment filed on 03/27/2003]. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

4. The amendment filed on 03/27/2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not

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supported by the original disclosure is as follows: at page 2, line 21, the cited “a storage management scheme” and line 23, “a bit” are new matters.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 12-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. As to claims 12, 19 and 26, the examiner regards the followings as new matter: “a range of the virtual address space” [e.g., see claim 12, lines 9-10], and the mechanism to associate the claimed “a range of the virtual address space” to each data entry in each layer of the generated hierarchical data storage structure. In addition, “a correlation schema” [e.g., see claim 12, line 13] with “data entry in the lowest layer corresponds to both a virtual address range in the virtual

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address space and a block address corresponding to a physical data block in the at least one data storage device" as claimed [e.g., see claim 12, lines 14-16].

8. As to claims 16, 23 and 29, the examiner regards the followings as new matter as new matter: "virtual address ranges of a homogeneous size" [e.g., see claim 16, line 2].

9. Thus, the specification is not in a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

10. As to claims 13-18 and 20-25, these claims have the same defect as their base claims, hence are rejected for the same reason.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

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13. As to claims 12, 19 and 26, line 1, it is uncertain what the claimed “primary storage” refers to? [i.e., Does it refer to the storage of the host system? Or those in the network systems? Or others?]. Furthermore, at lines 14-15, it is not understood what is meant by “a virtual address range in the virtual address space” [i.e., What is the scope of the claimed virtual address space? It is unclear how to classify the scope of the claimed virtual address space into the claimed range?]. In addition, at lines 17-19, it is unclear what are the links among the claimed each data entry in the primary storage, virtual address range and the unused physical storage.

14. As to claims 16, 23 and 29, it is not understood what is it meant by “virtual address ranges of a homogeneous size” [i.e., what is the criteria being used by applicants to defined a homogeneous size? What is the advantage to apply the claimed homogeneous size in the virtual address range processing?].

15. As to claims 13-18 and 20-25, these claims have the same defect as their base claims, hence are rejected for the same reason.

16. Due to the new matter and ambiguity issues of the claims, a sufficient prior art rejection could not be generated. Applicants are requested to restructure the claims to delete the new

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matters and comply with 37 CFR 1.75 and 35 USC 112 first and second paragraph in order to allow the examiner to determine exactly what the applicants are attempting to claim and invent.

17. To expedite the process of examination, the examiner requests that all future correspondences in regard to overcoming prior art rejections or other issues (e.g. 35 U.S.C. 112) set forth by the Examiner including those in prior office action, that applicants should provide and link to the most specific page and line numbers of the disclosure where best support is found (see 35 U.S.C. 132).

Response to Arguments

18. Applicant's arguments with respect to all canceled claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Chen whose telephone number is (703) 308-1155. The examiner can normally be reached Monday through Friday from 7:30 A.M. to 4:30 P.M.

21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached at (703) 308-1436. The fax phone numbers for this group are:

(703) 746-7238 (After Final Communication);
(703) 746-7239 (Official Communications); and
(703) 746-7240 (For Status Inquiries, Draft Communication).

22. Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

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Susan Chen

May 12, 2003



SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
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